

## FIRST REPORT OF MALES OF *TULLBERGIA CLAVATA* (COLLEMBOLA: ONYCHIURIDAE)<sup>1</sup>

R.D. Waltz<sup>2</sup>, J.W. Hart<sup>3</sup>

**ABSTRACT:** *Tullbergia clavata* is a common thelytokous parthenogenic species previously known only from females and juveniles. Males of this widespread Nearctic species were collected in Indiana and are reported for the first time.

The majority of named *Tullbergia* species currently recognized are known from the female adults and juveniles only (Christiansen and Bellinger, 1980-81). In Indiana, extensive collections of this genus have only rarely resulted in the discovery of males out of hundreds of individuals examined. Herein we report on the first collection of male *Tullbergia clavata* Mills.

Intensive collecting of *Tullbergia* species in Fayette County and Wayne County, Indiana, has resulted in the discovery of several new *Tullbergia* species (Christiansen and Bellinger 1980-81; Rusek 1991) and good series of otherwise well known species. Within this material, a series of *T. clavata* was discovered that included male individuals. Males of *T. clavata* have not previously been reported (Christiansen and Bellinger 1980-81, Table XX). This represents only the fourth species of *Tullbergia* in the Nearctic for which males have been reported. No significant differences in males compared to females were noted (no sexual dimorphism) nor were differences noted in the chaetotaxy of late instar juveniles compared to adults (epitoky) in the material studied.

Although the specimens reported herein key to *T. clavata* in the most recent keys to the Nearctic *Tullbergia* species available (Christiansen and Bellinger 1980-81), this series of specimens represents a more or less distinct population of *T. clavata* previously noted and incorporated by Christiansen and Bellinger (1980-81). Specifically, the specimens we studied show similarities to the type of *T. clavata* in PAO shape and organization, in possessing the same pseudocelli formulae, in having the a2 seta present on Abd.V, and in possessing the same plesiomorphic clavata-type chaetotaxy of the legs (Fjellberg, 1991) a character unique to *T. clavata* as far as is currently known. The specimens we studied differ from at least some populations of *T. clavata* in having the cephalic p1 and p2 setae subequal (only cephalic seta p4 is about 3-4x longer than the other p setae), and the "a" row of Abd. V is non-linear but

<sup>1</sup> Received December 8, 1994. Accepted January 28, 1995.

<sup>2</sup> IDNR, Division of Entomology and Plant Pathology, 402 West Washington, Room W-290, Indianapolis, IN 46204.

<sup>3</sup> 2809 Hiser Station Road, Milton, IN 47357.

forms a step series from a1, approaching the "m" row, to a4 which is in the normal "a" row position (compare especially Abd. V chaetotaxy in Christiansen and Bellinger, 1980-81: Fig. 380 A, = most similar to our studied material, with Fig. 380 B = *T. clavata*, type specimen). Not enough is currently known about the range of variability in *T. clavata* to justify the description of these forms as a new species, as has been recognized already by Christiansen and Bellinger (1980-81; Table XX and discussion).

Male voucher specimens were taken at the following locales: IN: Wayne County, Wood Duck Pond, Milton, 12-VI-1977, J.W. Hart, mounted in Marc Andre (water sol.) and IN: Fayette County, Manlove Woods, 29-IV-1978, J.W. Hart, mounted in Marc Andre (water sol.). Vouchers are deposited at the Purdue Entomological Research Collection, West Lafayette, IN 47907, and in the collection of R.D. Waltz, Indianapolis.

#### LITERATURE CITED

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